

FIG. 1

	d_1	d_2	d_3$	.....	d_{\beta-1}$	d_{β}	
p_1	w_{11}	w_{12}	w_{13}$	.....	w_{1\beta-1}$	$w_{1\beta}$	21
p_2	w_{21}	w_{22}	w_{23}$	.....	w_{2\beta-1}$	$w_{2\beta}$	
⋮	⋮						21
p_{α}	$w_{\alpha 1}$	$w_{\alpha 2}$	$w_{\alpha 3}$	.....	$w_{\alpha\beta-1}$	$w_{\alpha\beta}$	

FIG. 2

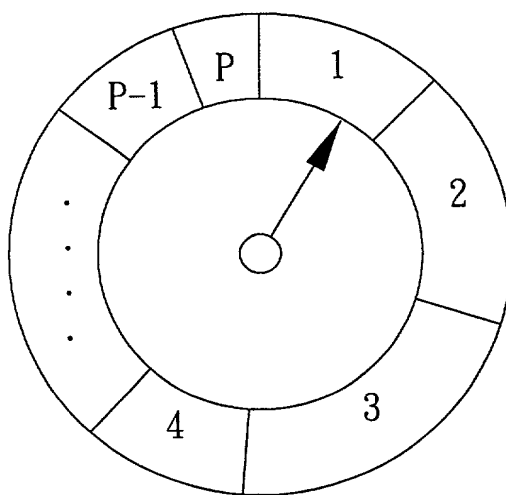


FIG. 3

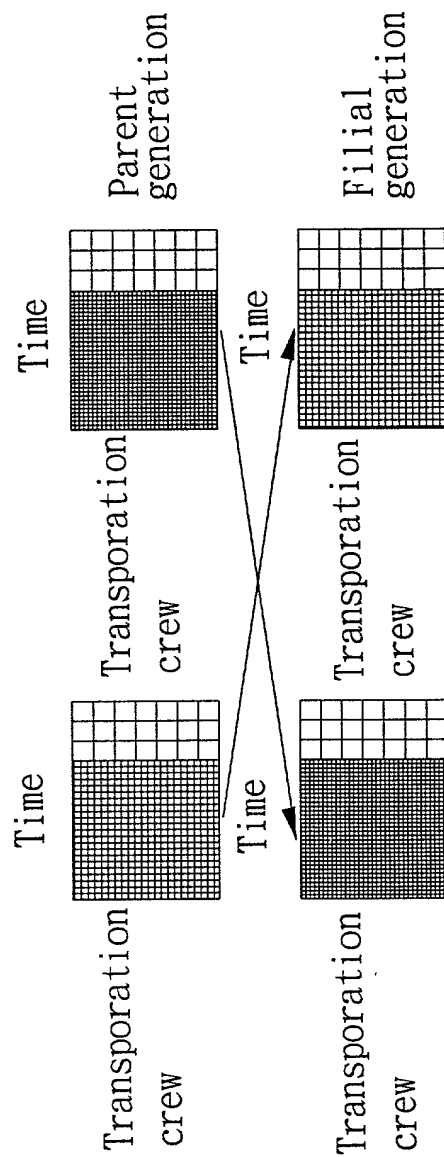


FIG. 4

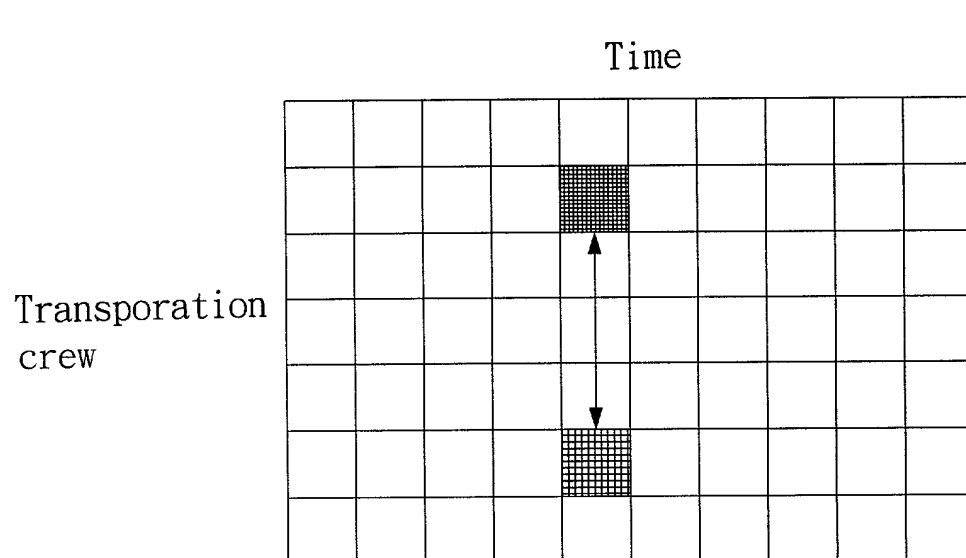


FIG. 5

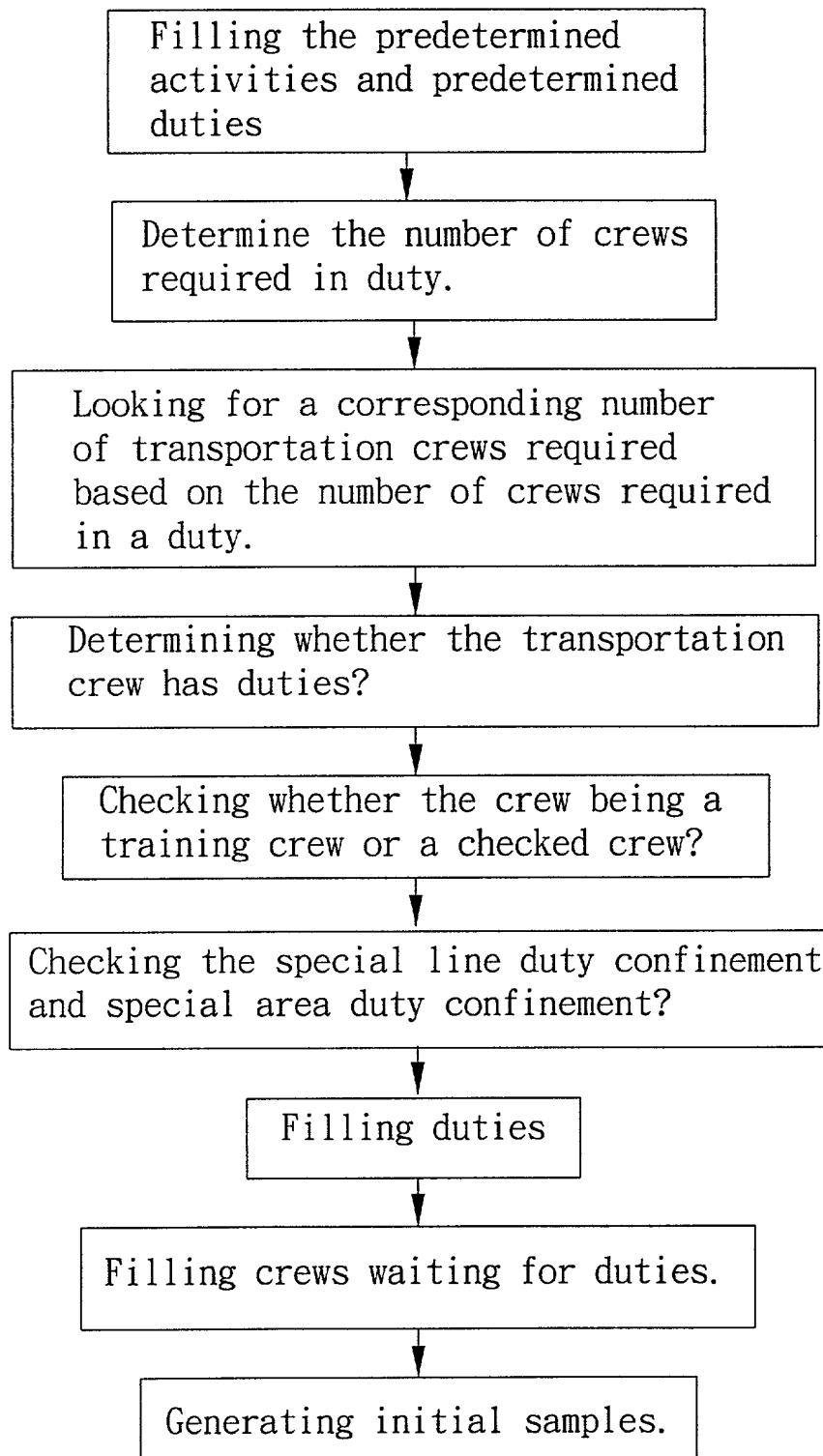


FIG. 6

PENALTY

Absolute confinement

One holliday

☒ per week

24H10H

FDP

MRT

32 hours in 7 days

1000

400

100

500

200

Optimun confinement

One holliday per week(max)

0

One holliday per week(min)

0

PNC Err

16500

☐ back to base

5

☒ Continuous Layover

600

☐ 6leg_no_pnc1

☐ 100H

☒ Average

FT

1

PNC

1

layover

1

PNC(1-5)

20

L/O(1-5)

5

PNC(WK)

20

L/O(WK)

5

GA Parameter

Time(min)

10

Generation

20000

SampleSpace

360

MutationRate

0.3

Population

200

MutationTimes

1

Crossover Rate

1

☐ crossoverlp

☐ crossoverl

☐ crossover2

☐ Mutation_999

☐ cantpnc-log999

☒ Elitism

30

☒ Record the interval

10

☒ OK

☒ Cancel

☒ Default

FIG. 7

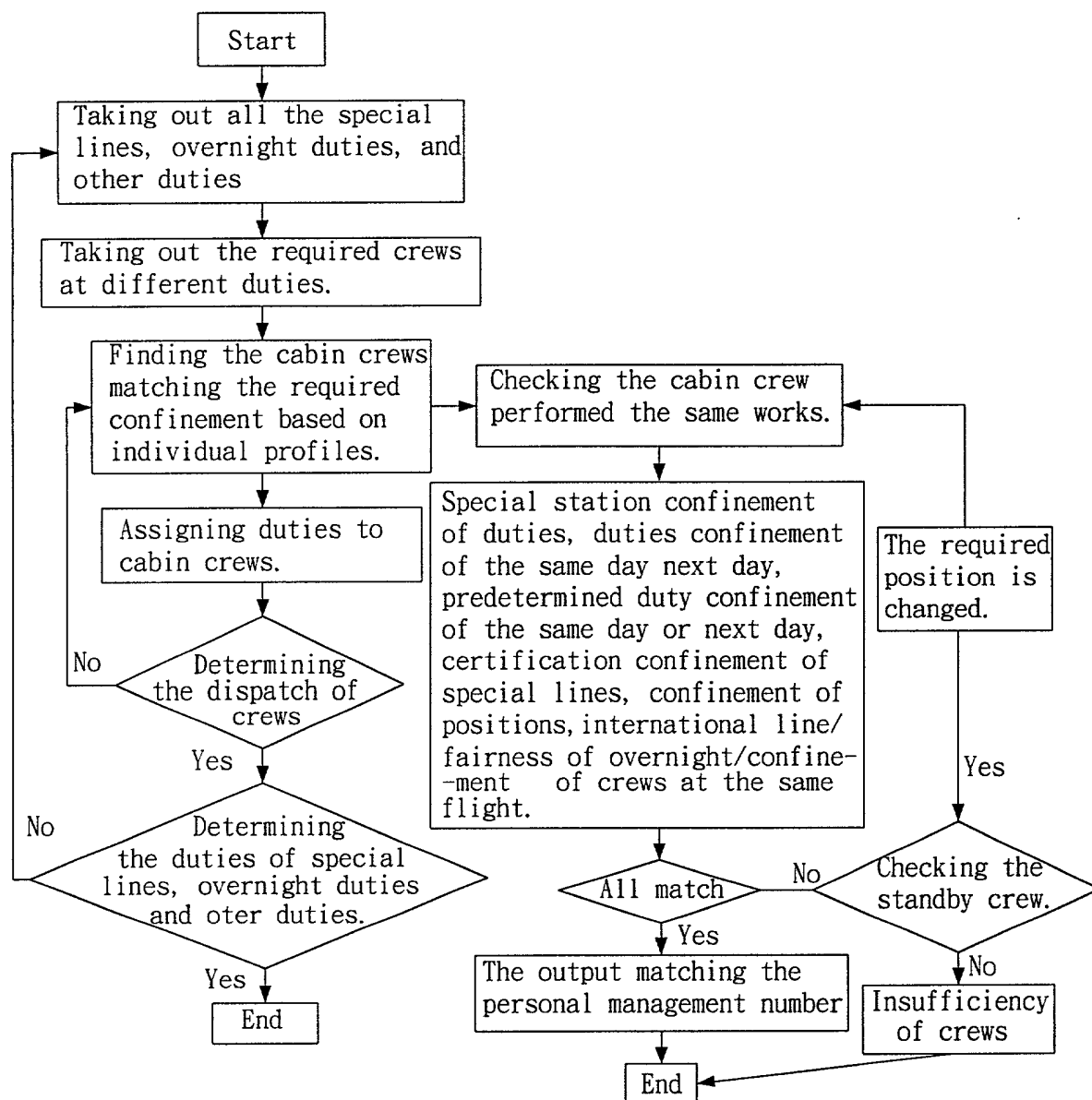


FIG. 8

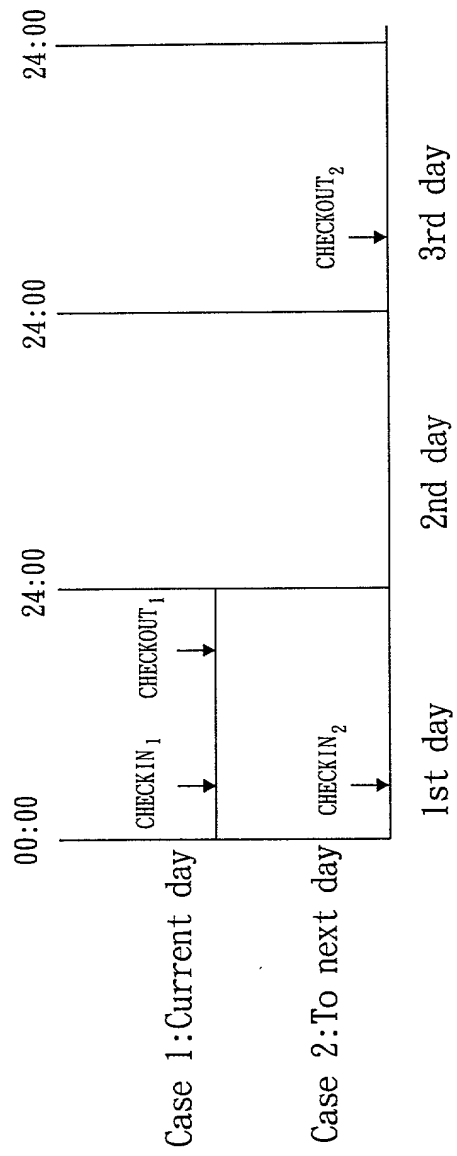


FIG. 9

TIME PERIOD

2001/ 3/1 -15

FT average 2105 minutes at this stage
FT average 12177 minutes in the past
Perdiem average 3551 minutes at this stage
Perdiem average 23156 minutes in the past
Enter Kernel , please wait...
Press Resume to continue....
Continue Process
Press Resume to continue...

☐ Test mode ☐ Log mode

Iteration number of times	4303	Total fitness value	561360
MRT	0	7D24H	0 Custom 528
PNC	124	SBt	82 Avg 427300
SBC	78	D/O	303 P999 0
AC	8040		

User setup

System setup

Run

Setup

☐ Resume

Exit

☐ Generate log file

10

☐ Generate Multi-Schedule

System kernel parameters

Confinement penalty value setting

☐ One holiday☐ per week☐ Average☐ Limit number of days FTPD Avg

3000

☐ SB☐ SB limit times PNC(1-5)

100

☐ SB habit

PNC Err

500

☐ Optimum number of days PNC Avg

1

☐ Minimum number of days

100

☐ MRT☐ D/D limit time

Average flight time

5

☐ International line average

100

☐ Average

50

Operation parameter

Generation

50000

SampleSpace

180

Population

100

MutationRate

0.8

MutationTimes

1

☒ OK☐ Cancel☐ Default

FIG. 10